

CLAIMS

What is claimed is:

1. A disk brake caliper mounting bracket, comprising:
5 an axle tube mounting portion; and
a brake caliper mounting portion;
wherein, the axle tube mounting portion is constructed and arranged to engage a portion
of a wheel mount, the wheel mount being attachable to an axle tube, to place the brake caliper
mounting portion in alignment with a wheel mounting portion of the wheel mount.
10
2. A disk brake caliper mounting bracket as in claim 1, wherein the axle tube mounting
portion includes a flange portion for engaging the wheel mount.
3. A disk brake caliper mounting bracket as in claim 2, wherein the flange portion includes
15 a plurality of through bores arranged in a circle around the flange to align with a plurality of
threaded bores in the axle tube and accommodate threaded fasteners engaged with the threaded
bores in the axle tube.
4. A disk brake caliper mounting bracket as in claim 3, wherein the flange portion includes
20 a central through bore through which a portion of the wheel mount can be positioned when the
wheel mount is mounted to the axle tube.
5. A disk brake caliper mounting bracket as in claim 4, wherein the axle tube mounting
25 portion includes a bore configured and sized to snugly fit over an exterior surface of the axle
tube.
6. A disk brake caliper mounting bracket as in claim 4, wherein the axle tube mounting
portion and the brake caliper mounting portion are separate portions of a single component.

7. A disk brake caliper mounting bracket as in claim 4, wherein the axle tube mounting portion and the brake caliper mounting portion are separate components, attachable to one another.
- 5 8. A disk brake caliper mounting bracket as in claim 7, and further comprising:
a caliper portion attached to the brake caliper mounting portion; and
a separate cap portion attachable to the caliper portion to clamp the bracket around an external surface of the axle tube.
- 10 9. A disk brake caliper mounting bracket as in claim 8, wherein at least one of the caliper portion and the cap portion is attached to the axle tube mounting portion with at least one threaded fastener.
- 15 10. A disk brake caliper mounting bracket as in claim 9, wherein the cap portion is attached to the caliper portion with at least two bolts engaging the two portions, the two bolts aligned generally in a plane normal to an axis of the axle tube when the bracket is mounted to the axle tube.
- 20 11. A disk brake caliper mounting bracket as in claim 1, wherein the axle tube mounting portion includes a bore configured and sized to snugly fit over an exterior surface of the axle tube.
- 25 12. A disk brake caliper mounting bracket as in claim 1, wherein the axle tube mounting portion and the brake caliper mounting portion are separate portions of a single component.
13. A disk brake caliper mounting bracket as in claim 1, wherein the axle tube mounting portion and the brake caliper mounting portion are separate components, attachable to one another.
- 30 14. A disk brake caliper mounting bracket as in claim 13, and further comprising:
a caliper portion attached to the brake caliper mounting portion; and

a separate cap portion attachable to the caliper portion to clamp the bracket around an external surface of the axle tube.

15. A disk brake caliper mounting bracket as in claim 14, wherein at least one of the caliper
5 portion and the cap portion is attached to the axle tube mounting portion with at least one threaded fastener.

16. A disk brake caliper mounting bracket as in claim 15, wherein the cap portion is attached
10 to the caliper portion with at least two bolts engaging the two portions, the two bolts aligned generally in a plane normal to an axis of the axle tube when the bracket is mounted to the axle tube.

17. A disk brake caliper mounting bracket as in claim 1, wherein the axle tube mounting
15 portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

18. A disk brake caliper mounting bracket as in claim 1, and further comprising the wheel
mount.

19. A disk brake caliper mounting bracket as in claim 1, and further comprising the axle tube.

20. A disk brake caliper mounting bracket as in claim 1, wherein, there is direct engagement
between the axle tube mounting portion and the wheel mount.

21. A disk brake caliper mounting bracket as in claim 4, wherein the axle tube mounting
25 portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

22. A disk brake caliper mounting bracket as in claim 9, wherein the axle tube mounting
30 portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

23. A disk brake caliper mounting bracket, comprising:
an axle tube mounting portion; and
a brake caliper mounting portion;

wherein, the axle tube mounting portion is constructed and arranged to engage an end
5 surface of an axle tube to place the brake caliper mounting portion in alignment with a wheel
mounting portion of a wheel mount attachable to the axle tube.

24. A disk brake caliper mounting bracket as in claim 23, wherein the axle tube mounting
portion includes a flange portion for engaging the wheel mount.

25. A disk brake caliper mounting bracket as in claim 24, wherein the flange portion includes
a plurality of through bores arranged in a circle around the flange to align with a plurality of
threaded bores in the axle tube and accommodate threaded fasteners engaged with the threaded
bores in the axle tube.

26. A disk brake caliper mounting bracket as in claim 25, wherein the flange portion includes
a central through bore through which a portion of the wheel mount can be positioned when the
wheel mount is mounted to the axle tube.

27. A disk brake caliper mounting bracket as in claim 26, wherein the axle tube mounting
portion includes a bore configured and sized to snugly fit over an exterior surface of the axle
tube.

28. A disk brake caliper mounting bracket as in claim 26, wherein the axle tube mounting
portion and the brake caliper mounting portion are separate portions of a single component.

29. A disk brake caliper mounting bracket as in claim 26, wherein the axle tube mounting
portion and the brake caliper mounting portion are separate components, attachable to one
another.

30. A disk brake caliper mounting bracket as in claim 29, and further comprising:

a caliper portion attached to the brake caliper mounting portion; and
a separate cap portion attachable to the caliper portion to clamp the bracket around an external surface of the axle tube.

5 31. A disk brake caliper mounting bracket as in claim 30, wherein at least one of the caliper portion and the cap portion is attached to the axle tube mounting portion with at least one threaded fastener.

10 32. A disk brake caliper mounting bracket as in claim 31, wherein the cap portion is attached to the caliper portion with at least two bolts engaging the two portions, the two bolts aligned generally in a plane normal to an axis of the axle tube when the bracket is mounted to the axle tube.

15 33. A disk brake caliper mounting bracket as in claim 23, wherein the axle tube mounting portion includes a bore configured and sized to snugly fit over an exterior surface of the axle tube.

20 34. A disk brake caliper mounting bracket as in claim 23, wherein the axle tube mounting portion and the brake caliper mounting portion are separate portions of a single component.

35. A disk brake caliper mounting bracket as in claim 23, wherein the axle tube mounting portion and the brake caliper mounting portion are separate components, attachable to one another.

25 36. A disk brake caliper mounting bracket as in claim 35, and further comprising:
a caliper portion attached to the brake caliper mounting portion; and
a separate cap portion attachable to the caliper portion to clamp the bracket around an external surface of the axle tube.

37. A disk brake caliper mounting bracket as in claim 36, wherein at least one of the caliper portion and the cap portion is attached to the axle tube mounting portion with at least one threaded fastener.

38. A disk brake caliper mounting bracket as in claim 37, wherein the cap portion is attached to the caliper portion with at least two bolts engaging the two portions, the two bolts aligned generally in a plane normal to an axis of the axle tube when the bracket is mounted to the axle tube.

39. A disk brake caliper mounting bracket as in claim 23, wherein the axle tube mounting portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

40. A disk brake caliper mounting bracket as in claim 23, and further comprising the wheel mount.

41. A disk brake caliper mounting bracket as in claim 23, and further comprising the axle tube.

42. A disk brake caliper mounting bracket as in claim 23, wherein, there is direct engagement between the axle tube mounting portion and the wheel mount.

43. A disk brake caliper mounting bracket as in claim 26, wherein the axle tube mounting portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

44. A disk brake caliper mounting bracket as in claim 31, wherein the axle tube mounting portion and the brake caliper mounting portion are aligned at an angle to one another, the angle being greater 0°.

45. A disk brake caliper mounting bracket as in claim 23, wherein a portion of the axle tube mounting portion is constructed and arranged to be clamped between the axle tube and the wheel mount.
- 5 46. A disk brake caliper mounting bracket as in claim 26, wherein a portion of the axle tube mounting portion is constructed and arranged to be clamped between the axle tube and the wheel mount.
- 10 47. A disk brake caliper mounting bracket as in claim 31, wherein a portion of the axle tube mounting portion is constructed and arranged to be clamped between the axle tube and the wheel mount.
48. A disk brake caliper mounting bracket, comprising:
an axle tube mounting portion; and
15 a brake caliper mounting portion, the axle tube mounting portion and the brake caliper mounting portion being aligned at an angle to one another;
wherein, the axle tube mounting portion is constructed and arranged to be clamped
between an end surface of an axle tube and a wheel mount to place the brake caliper mounting
portion in alignment with a wheel mounting portion of the wheel mount.
- 20 49. A disk brake caliper mounting bracket, wherein the angle between the axle tube mounting portion and the brake caliper mounting portion is equal to a camber angle of the wheel mount.
- 25 50. A method for accurately positioning a disk brake caliper with respect to a wheel mount, comprising:
acquiring a reference surface on one of an axle tube and a wheel mount, the reference
surface being perpendicular to a longitudinal axis of the axle tube when the wheel mount is
attached to the axle tube;
determining a desired alignment angle of the disk brake caliper with respect to the
30 longitudinal axis of the axle tube;

providing a disk brake caliper mounting bracket that includes an axle tube mounting portion for engaging the reference surface and a brake caliper mounting portion angled with respect to the axle tube mounting portion at the desired alignment angle;

positioning the axle tube mounting portion against the reference surface;

5 rotating the disk brake caliper mounting bracket with respect to one of the axle tube and the wheel mount to position the disk brake caliper mounting bracket at a desired circumferential position;

locking the disk brake caliper mounting bracket in the desired position; and

mounting the disk brake caliper to the brake caliper mounting portion.

10

51. A method as in claim 50, and further comprising:

positioning the brake caliper mounting portion at a desired radial distance from the longitudinal axis of the axle tube.

15 52. A method as in claim 50, wherein locking the disk brake caliper mounting bracket in the desired position comprises clamping the disk brake caliper mounting bracket between the axle tube and the wheel mount.

20